

## ANSWERS: Types of substances

	Type of substances	Type of <b>particle</b> present	The <b>bonding</b> (attractive forces between particles)
Iodine	molecular	molecules	strong covalent bond between atoms weak intermolecular force between layers
C graphite	covalent network, 2D	atoms	strong covalent bond between atoms weak intermolecular force between layers
NH <sub>3</sub>	molecular	molecules	intermolecular
Zn	metallic, 3D	cations in a sea of delocalised electrons	metallic bond
Mg	metallic, 3D	cations in a sea of delocalised electrons	metallic bond
O <sub>2</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
MgO	ionic, 3D	oppositely charged ions	ionic bond
SiO <sub>2</sub>	covalent network, 3D	atoms	strong covalent bond between atoms
Br <sub>2</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
Na	metallic, 3D	cations in a sea of delocalised electrons	metallic bond
P <sub>4</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
SO <sub>3</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
MgCl <sub>2</sub>	ionic, 3D	oppositely charged ions	ionic bond
Cl <sub>2</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
CuCl <sub>2</sub>	ionic, 3D	oppositely charged ions	ionic bond
K	metallic, 3D	cations in a sea of delocalised electrons	metallic bond
CO <sub>2</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
S <sub>8</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
diamond	covalent network, 3D	atoms	strong covalent bond between atoms
Ag	metallic, 3D	cations in a sea of delocalised electrons	metallic bond
sodium oxide	ionic, 3D	oppositely charged ions	ionic bond
aluminium oxide	ionic, 3D	oppositely charged ions	ionic bond
CaCl <sub>2</sub>	ionic, 3D	oppositely charged ions	ionic bond
H <sub>2</sub> O	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
NaCl	ionic, 3D	oppositely charged ions	ionic bond
SiCl <sub>4</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
SCl <sub>2</sub>	molecular	molecules	strong covalent bond between atoms weak intermolecular force between molecules
Cu	metallic, 3D	cations in a sea of delocalised electrons	metallic bond